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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,147	10/28/2003	Chien-Hua Chen	10005237-3	5327

7590 04/06/2006

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EXAMINER	
NGUYEN, TAI V	
ART UNIT	PAPER NUMBER

3729

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/695,147	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Tai Van Nguyen	<b>Art Unit</b> 3729	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10, 13, 15-19, 21 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 11, 12, 14, 20, 22 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/003,600.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. In regards to the merits of Sugitani et al (US 4,509,063) in the previous Non Final Rejection filed 1/4/2006, the applicants arguments that Sugitani et al does not teach bonding a top surface of a first substrate to a bottom of a second substrate, wherein a pattern etch mask is formed on at least one of the top surface of the first substrate and the bottom surface of second substrate have been found to be persuasive.

Accordingly, the previous Non-Final-Rejection has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hawkins et al (US 4,822,755).

As applied to claim10 and 13, Hawkins et al disclose a method of fabricating a fluid ejection device comprising: bonding a top surface of a first substrate (14, Fig. 5) to a bottom surface of a second substrate (32), wherein a patterned etch mask layer (30) is formed on at least one of the top surface of the first substrate and the bottom surface of the second substrate; and etching a fluid channel (34) in the first and second substrates extending through an opening in the patterned etch mask layer.

As applied to claims 16 and 24, Hawkins et al disclose wherein the fluid channel is formed using a wet etch (column 3, line 68).

As applied to claims 18, 19 and 21, Hawkins et al disclose a method of fabricating a fluid channel for a fluid ejection device comprising: bonding a top surface of a first substrate (32, Fig. 9) to a bottom surface of a second substrate (14), wherein the top surface of the of substrate has a feed trench (34); etching a feed hole from a top surface of the second substrate to the top surface of the first substrate; and removing a remaining portion of the first substrate to form a fluid channel through the substrates (column 3, lines 17-47).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15,17, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campanelli et al in view of Hawkins et al (US 4,601,777).

As applied to claims 15, 17, 23 and 25, Campanelli et al disclose substantially all of the limitations of the claimed invention except that the fluid channel is formed using dry and wet etching.

However, Hawkins et al disclose the fluid channel is formed using dry and wet etching (column 7, lines 53-55). It would have been obvious to one of ordinary skill in

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the art at this time the invention was made to have modified the method of Hawkins by including wet and dry etching process, as taught by Hawkins to positively provide accurately two substrate is bonding together and diced to produce a plurality of individual printheads (column 3, lines 57-63).

### ***Allowable Subject Matter***

6. Claims 11, 12, 14, 20, 22 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Van Nguyen whose telephone number is 571-272-4567. The examiner can normally be reached on M-F (7:30 A.M - 4:30 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN.  
March 16/2006



**A. DEXTER TUGBANG**  
**PRIMARY EXAMINER**